No 106
March 9th
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Passed March 22 1827
W. R. H.

An
Inaugural Essay
on
Hepatitis.
Presented to the
Medical Professors
Of the University of Pennsylvania.
For the degree of
Doctor of Medicine.
By John S. O'Hear, of Charleston. S.C.
Philadelphia.
1827.

Hepatitis.

Before entering on the consideration of this disease, I shall notice briefly the structure and situation of the liver, and its more important connections with the rest of the system.

This organ occupies the right hypochondriac, the upper portion of the epigastric, and a small part of the left hypochondriac regions. Its superior convex surface is closely applied to the diaphragm to which it is attached by several processes of peritoneum called its ligaments. It is connected to the stomach below by another reflexion of peritoneum, the lesser omentum. The same membrane is continued over its surface, forming for it a complete coat. The right extremity of this organ is very thick, extending downwards to the margin of the ribs; while the left tapers to a thin edge, and lie, in contact with the stomach. The liver is extremely vascular, and very complex in its struc=

structure. Besides the numerous branches of ves=
=sels which ramify through its substance, it is
also composed of a congeries of small glandular bo=
=dies, united by cellular substance, and formed
by the extreme ramifications of the blood-vessels and
biliary ducts. Its blood-vessels are the hepatic ar=
=tery, the vena Portarum, and the hepatic veins -
The two first convey blood to it, and the last re=
=turns it into the general circulation. The hepatic
artery is a branch of the caliac, and is supposed to
be the nutrient vessel of the liver. The vena por=
=tarum is formed by the union of all the veins of the
intestines, stomach, pancreas and spleen, and
performs the office of an artery, in secreting the
bile. The hepatic veins arise from the termina=
=tion, of the two former, and empty into the
vena cava ascendens.
The sympathetic associations of the liver with other
parts of the system, are also deserving of attention.

since they throw some light on the anomalous symp=
=toms which arise in diseases of this organ.
The sympathy between the liver and brain is fami=
=liar to every practitioner, head-ache, vertigo, &
a disturbed state of mind being almost uniformly
present in hepatic disorder.
Not less so, is the consent between the liver and sto=
=mach. This is seen in hepatitis, in which nau=
=sea, vomiting with dyspeptic symptoms are com=
=mon attendants.
The last of these sympathies which I shall notice,
is that which exists between the liver & the exter=
=nal surface of the body. This is one of the most im=
=portant, as it explains the modus operandi,
of two very common causes of hepatic derange=
=ment, viz: heat and sudden changes of tem pera=
=ture.
When we contemplate the structure of the liver, its
immense size, and the peculiarity of its vascular

arrangement, and reflect on its intimate connection, with the abdominal viscera & other parts, by means of its numerous sympathies, as well as by its ligaments, blood vessels & ducts, we cannot be surprised that it should be so often the seat of disease.

Among the morbid affections, to which it is liable is inflammation. This may be seated either in its investing membrane, or in its parenchyma; and the symptoms will be modified accordingly. In the first we will have the phenomena of serous inflammation, such as darting lancinating pain in the part, a hard, corded pulse with much febrile excitement. In the second the pain will be obtuse, or of a throbbing kind; there will be greater disturbance in the functions of the organ, & more sallowness of the skin & eye. It is probable, however that inflammation is seldom confined to one of these tissues, exclusively.

Hepatitis, has been divided by authors into acute and chronic. The former is characterized by its violence, and the rapidity of its progress while the latter is more slow and insidious, its approach, and its alarming symptoms.

Acute hepatitis is brought on by the ordinary causes of the phlegmasiæ, such as external violence, exposure to cold, violent exercise &c. But the most fruitful sources of the disease are a high range of the temperature, and the immoderate use of spirituous liquors. Heat is a powerful stimulus to the secretory office of the liver; exciting them to inordinate action, and subsequently leaving them in a state of debility. The application of cold under such circumstances, is a delay in the secretion, obstruction in the organ, and perhaps inflammation. Hence the frequent occurrence of this disease amongst

up during the autumnal months, when the excessive heat of the day is followed by cold evenings. Ardent spirits operate in the same way as heat, producing a first high excitement, which is succeeded by a state of corresponding exhaustion. The mate is said to be more liable to this, disease than any, no doubt, to their greater exposure, and their more irregular habits.

Acute hepatitis usually commences with rigors, succeeded by pain in the right hypochondrium, shooting to the shoulder; heat of skin and considerable pyrexia ensue, together with cough aggravated respiration and difficulty of lying on the left side; the pulse is frequent and hard; the tongue is white and dry, with extreme thirst; the stomach is sometimes much disturbed, there is nausea & vomiting, the bowels are constipated, and the stools, when procured,

show a frequency of bile; the urine is high coloured and sparingly secreted. Throughout the case, the spirits are much depressed.

These symptoms vary in different cases according to the part of the organ affected. When its upper convex surface, or the ligaments connected with the diaphragm are inflamed, the cough, difficulty of breathing and dyspnoea are more distressing and it has in some cases been mistaken for pneumonia. When on the contrary its concave portion is the seat of disease, the stomach is most disturbed, giving rise to many of the symptoms of gastritis. By a careful examination however, a sufficiently clear diagnosis may be obtained. From pneumonia it is distinguished, by the pain being lower down in the side, and its being increased by pressure under the false ribs. The cough too, comes on much later than in pneumonia, while the evacuations indicate greater derangement

derangement of the biliary secretion has been, in the other place, noticed. The position of the pain, described as in the shoulder, together with the colour of the skin, will generally distinguish it from jaundice. It may readily be distinguished from spasm of the biliary ducts, with which it has been confounded, by the rigors, the frequency of pain, the permanency of the pain, and by the patient being able to lie in a straight posture.

This disease most frequently ends in resolution or in suppuration. Its termination in resolution is denoted by a gradual subsidence of pain and febrile symptoms, with a return of the appetite, an improvement in the complexion, at short time, the event is attended by some critical discharge from the skin, bowels, or kidneys, or by a hæmorrhage from the nose or hæmorrhoidal vessels.

Suppuration is a more common result of the disease in hot climates, the well as its approach is announced by increase of pain, rigors, frequent pulse, nausea, hot dry skin &c. A heavy dull uneasiness in the part, increased to acute pain; coming fever, headache, pain in the bowels, denote the formation of matter.

The abscess when formed is variously disposed of. If no adhesion takes place with contiguous parts, it bursts into the cavity of the abdomen, producing peritoneal inflammation, almost quickly terminable in death. Sometimes, adhesion has taken place with the abdominal parietes, but not extending externally at other, the abscess opens into some portion of the intestinal canal & the pus passes off with the stools. The last are the most favourable terminations for the patient, and frequent cures are said to have been effected in this way. Occasionally the matter

matter forced its way through the diaphragm into the lungs & is brought up by coughing, or else it is effused into the cavity of the thorax, forming empyema. The prognosis in this case is very unfavourable, tho' recoveries have taken place under these circumstances.

From the history which has been given of this case, the indications of cure are obvious; viz to subdue inflammation, and to rectify the biliary secretion. Venesection is evidently required, and must be used with freedom; repeating it as often as it is demanded by the pain and the state of the pulse. Topical bleeding is scarcely of less importance. Cups or leeches are to be applied to the side, and may be continued, even when the lancet is no longer admissible. Having carried general & local blood-letting to a sufficient extent, a large blister should next be applied over the part, and may be often renewed,

or the blistered surface of the skin with some stimulating ointment. While we are employing these means, purgatives, must not be omitted. One of the most usual effects of inflammation, is to derange the function, of the organ in which it occurs. This is the case in hepatitis; purgatives, therefore, and particularly the mercurials, from the property which they possess of emptying the biliary duct, and improving the hepatic secretion, are invaluable remedies in the disease. Calomel should be given in large doses, and its operation on the bowels quieted by the sedative opiate or jalap. In the tropical climates, mercury is generally used to produce salivation in the early stage of this disease. But this practice tho' perhaps proper in those countries, is not admissible here. In addition to the foregoing measures, the antiphlogistic regimen must be strictly enjoined. The patient's food should consist of the least sti-

stimulating articles of diet as thin gruel, or arrow-root jelly, barley water, toast-water &c. His drink should be of a cooling, saline, or lemonade, effervescing water &c. By these means properly directed, we will generally succeed in subduing the disease. But should it prove obstinate, we must then resort to mercury as a sialogogue. It should be given until it affects the mouth slightly; a profuse salivation is both disagreeable & dangerous. For this purpose one or two grains of calomel, or three or four of the blue pill may be given at bed-time. If we wish the mercurial action to be more speedily induced, we may direct a drachm or two of the mercurial ointment to be rubbed into the inner part of the thighs every night & morning, as soon as the gums of the jaw are sensibly affected by the latter, the medicine should be discontinued or diminishly reduced. By keeping him in

this state for some time, the biliary secretion will be found to improve, the complexion to display a more healthy aspect, and in short, most of the unpleasant symptoms will disappear. Instances, however, will occasionally occur, in which the disease will resist all our remedies, and terminate in suppuration. When this takes place, the mercury must be laid aside and the matter should be invited to the surface by the former poultices or fomentations, to the part. As soon as the fluctuation is felt it should be opened, and never be suffered to discharge itself unnecessarily. The patient will now require a more generous diet, and generally the cinchona and other tonic medicines will be necessary.

Chronic hepatitis may be either the result of the above, or it may arise as a primary disease, and from the first be of a precisely active inflammation. Therefore the treatment will

cracks or any unfavorability, and sometimes cre-
-ates a disposition for a constitutional time with-
out giving the patient much inconvenience, by
the deposits on the grade of digestion or secre-
-tion, based upon the, perhaps, unchecked
causes or some other in which the tissue
degeneration, however, fatal, completely disappe-
-ared, tho' no symptoms during the patient's life
time, indicated disease in the first.
In most cases, however, a brain-disposition appe-
-ared the outline, which to the attentive observer
will point out the true nature of the dis-
-ease. The patient becomes inactive, and seems
to any exertion of body or mind he is conscious
of the drowsiness and lethargic position of
-ter in bed. The bowels are torpid and the
evacuations when they do take place, are ne-
-ith; the urine is turbid depositing a lateritious
sediment; the skin is dry and harsh; the coupe

complexion pale and sallow, the pulse is frequent and feeble in proportion to the obstruction of the circulation in the lungs; dull aches prevail on the right side, the dullness is confined to the left; in other cases there is merely sense of weight & tiredness in the part. After time the stomach gets feebler, the appetite is capricious; the tongue is heavily loaded; and flatulence, sour eructations, and other signs of indigestion & obstruction in the liver appear. The patient now becomes gloomy and despondent, and loses his relish for society. In the progress of the disease the liver becomes increased in volume, and may be felt extending below the margin of the ribs. Not unfrequently the lungs at the period take on disease, either from the encroachment of the enlarged liver upon the chest, or from a metastasis from the liver. There is then, much difficulty of breathing, with a tightness across

the cause strongly marked, as there, in other instances, the lungs are more decidedly affected; pulmonary expectoration takes place; the fever increases, the patient wasts away as it does, with all the symptoms of one of those, and never rallies.

The causes of primary chronic hepatitis are the same as those of the acute species, but acting more slowly & gradually. Of these by far the most general is the operation, in the habitual use of intoxicating liquors. The injurious effects of these articles on the liver is a subject of such common observation, that a bloated abdomen & sallow complexion, are considered as certain characteristics of the drunkard, as his faltering speech and unsteady gait. When the disease succeeds to acute hepatitis, it is in most cases, to be ascribed to the neglect of inflammatory evacuations, or to the too early employ-

ment of bones, and stimulants.

Chronic hepatitis often continues for any length of time, without serious alteration of organization of the liver. The most common is enlargement of the organ from congestion. In these cases, large quantities of blood are collected in it, especially: this in some instances, acts so as to obstruct the biliary canal, and gives rise to the most formed diseases.

The liver is frequently found enlarged in dropsy, without any original hepatic disease; the enlargement is from a deposit of morbid matter in its parenchyma. A remarkable case of this kind is related by Coleman, in which the liver weighed forty pounds.

[illegible] is [illegible] very different [illegible] from the preceding [illegible], when it is indurated and diminished in [illegible], [illegible] is [illegible] [illegible]

=ted. There is a common effect of chronic inflammation in glandular [illegible] secretion has been affected.

There are other affections of the liver supposed to be of a [illegible] character, which are [illegible] form in the [illegible]. These are tubercles, which commonly occupy the posterior part of the organ, giving it the appearance of being [illegible].

Hydatids are also sometimes found attached to the liver or seated deeply imbedded in its substance. In rather rare cases they are not entirely; they are supposed by Baillie to be "a sort of [illegible] of [illegible]". In some cases they become [illegible] containing a coat [illegible] filled. Thomas [illegible] [illegible] gallstones found [illegible] from an hydatid [illegible].

[illegible] different [illegible] the liver is found on dissection [illegible]

-ted by the best authorities, that there are no signs by which they can be distinguished from each other during the life of the patient. It is suppo- sed that the organs are enlarged, but we can- not determine whether this arises from inflam- mation dependent upon hepatization, or from conges- tion. But this is left to be regarded when we con- sider, that all these affections, however insig- nificant, must be connected with a degree of inflammation, and that the means [illegible] calculated to remove this will prove unavailing. However, some of them are utterly incurable, so that we could effect nothing more, by the know- ledge of their existence.

The means principally to be relied on in the treatment of chronic hepatitis, are, local de- pletion; counter-irritation by blisters, & purga- tive [illegible] ; an alterative course of mer- cury. — Venesection is not generally [illegible]

[illegible]

alkali and some aromatic. This treatment will generally prove successful in recent cases, and where the disease is functional. But if the structure of the liver has undergone any of the alterations before enumerated, it will as generally fail, and our chief reliance is to be placed on mercury. It must be introduced into the system in the most gradual manner, so as to obtain its alterative effects. During its use the morbid secretions should be carried off, by giving occasionally, some mild purgative. When the mercury proves ineffectual, or is considered inadmissible by the debility of the patient, the nitro-muriatic acid will be found a valuable substitute. It is used principally in the form of a bath, either general or applied to the lower extremities. "The nitro-muriatic acid bath, (says Dr Scott) appears in a particular manner to affect the glands, and to alter their

secretions; and on this power a great part of its value, in derangements of the liver, seems to depend. It sometimes very suddenly increases the secretion of bile; and this effect may be kept up for a length of time".

In addition to these active remedies, the diet of patient requires some attention. His food should be simple and plainly dressed; and he should be cautioned against exceeding the bounds of moderation, which he is apt to do, the appetite being often unimpaired. All crude, acescent vegetables; pastry; soups; oily meat, and high seasoned dishes, must be prohibited.

The warm bath, succeeded by friction, is a useful auxiliary in the cure of this disease. It relieves the internal organs; and by keeping up a moderate action on the skin, promotes the biliary secretion. —

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